

Get long-lasting durability with Professional Innovations for Reliability from HP



How reliable is your business notebook?

Your business notebook needs to take the abuse of working mobile and traveling about town, across the country, and around the globe. It should offer durable materials that are scratch resistant, along with rugged construction to withstand drops, minor spills, and frequent opening and closing. You need all of this toughness in a sophisticated, professional notebook that's lightweight and easy to use.

What's more, your business notebook should be built to last, with robust testing and quality processes designed to fit the way you work. We know that you rely on your business notebook to support you every day, so HP commits to quality and innovation from the start. We design and build all HP Business Notebook PCs to deliver a superior experience with the quality improvements and innovations that mobile professionals need to work and stay productive.

Commitment to quality

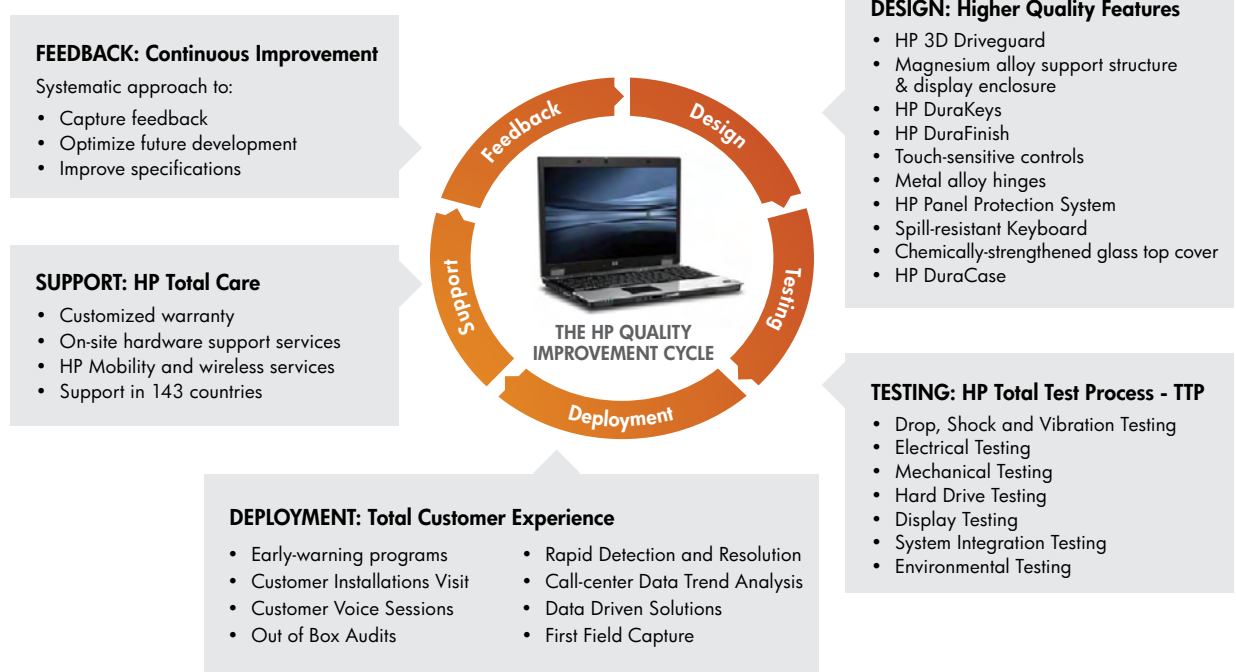
HP's continuous quality process for business notebooks helps ensure quality across the product lifecycle and beyond—throughout the design, development, manufacturing, and service and support processes. The result is higher-quality products, solutions, and experiences.

Our processes involve every major function of the company: supply chain, marketing, design, engineering, service and support, and more. We want our products to provide the consistency and stability that you require. Our attention to detail in the design process, combined with the highest-quality materials in production, has created a line of some of the most durable business notebook PCs in the industry.

The HP quality improvement process includes:

- **Design: Higher quality features.** HP designs and builds our Business Notebook PCs to deliver a superior experience with quality improvements and features based on years of direct customer feedback and exhaustive development, testing, validation, and analysis.
- **Test: HP Total Test Process.** Every HP Business Notebook PC is subjected to the HP Total Test Process (TTP)—a minimum of 100,000 hours of rigorous tests that help ensure superior quality and reliability in a wide range of applications and operating environments. Our testing process is constantly reviewed and enhanced to meet evolving customer and market needs.

The HP Quality Improvement Process



- **Deployment: Total Customer Experience.** As part of our quality processes, early-warning programs have been statistically proven to effectively identify and help address issues. Programs include customer installation visits, out-of-box audits, and rapid detection and resolution for new products.
- **Support: HP Total Care.** Within the HP Total Care portfolio, HP Support Services offers extended service contracts that go beyond standard warranties. These services cover needs at every stage of the technology lifecycle to help maximize the initial return on investment and reduce loss of productivity.
- **Feedback: Continuous improvement loop.** At every step—from design and development through production and testing and on into the workplace—everything we learn goes into making the next generation of HP Business Notebooks the best it can be to deliver the highest levels of quality and best customer experience.

HP Professional Innovations for Reliability

Notebooks are made to be mobile, but your business notebook must stand the test of time and the daily stress of a mobile work environment. Business-rugged durability minimizes downtime and helps create a lasting investment.

Why you need HP Professional Innovations for Reliability

To help protect your notebook from the wear and tear of mobile work environments, business travel, and commuting, you need a tested, reliable, and durable solution. HP Business Notebook PCs deliver solid notebook construction and built-in durability, offering mobile professionals a highly dependable business tool. Enhanced durability means fewer notebook failures, a longer notebook lifespan, and most importantly, the durability you need to support your business.

HP's quality process helps ensure quality throughout design, development, manufacturing, service, and support of HP Business Notebooks. The result is a rugged, reliable, robust line of HP Business Notebooks that help you get more done in more places.

Change the way you work with HP Business Notebooks and Professional Innovations

HP Business Notebooks offer your business mobile computing without compromise. That's because our expansive suite of business-ready innovations for notebooks focuses on solving real problems and meeting real needs. Each HP Business Notebook comes with certain HP Professional Innovations to provide you with the right solution for your specific needs.



Change the way you work with innovations that make HP Business Notebooks more secure, easy to use, reliable, and with a reduced impact on the environment. HP gives you a broad business notebook portfolio and true flexibility tailored to your industry, workforce, workloads, and resources.

The HP Total Test Process

The HP Total Test Process consists of a minimum of 100,000 hours of rigorous tests that help ensure superior quality and reliability in a wide range of applications and operating environments.

A sampling of the tests includes:

Drop, shock, and vibration testing

- Verifies full system functionality in several scenarios
- Applies to unboxed and boxed (packaged) systems
- Tests in both operating and non-operating modes
- Monitors critical components both independently and as part of the system

Hard drive testing

- Shock transmission tests ensure the effectiveness of the shock-resistant hard-mount design of HP 3D DriveGuard
- Active testing verifies the effectiveness of HP 3D DriveGuard

Keyboard and button testing

- Verifies functional and mechanical performance and life of keys
- Applies 10 million keystrokes to validate mechanical, electrical, and cosmetic properties

Display panel testing

- Scuff testing verifies the effectiveness of the HP Panel Protection System
- Display hinge clutches tested to 25,000 open/close cycles

Electrical testing

- Verifies performance of local and wide-area wireless connectivity
- Confirms that the battery and battery charger meet expectations

Examples of HP Professional Innovations for reliability

MIL-STD-810G Military Standards Testing	Passes rigorous MIL-STD-810G testing. ¹ Most HP EliteBooks are designed to meet the tough military standards (MIL-STD-810G) for drop, vibration, dust, humidity, altitude, and high temperature.
HP 3D DriveGuard²	Helps protect your notebook's hard drive against impact, bumps, or drops. Your critical information is easily protected while you are on the move. The HP 3D DriveGuard relies on a three-axis digital accelerometer that acts as a motion sensor, notifying the system software of any sudden movement and temporarily parking the hard drive. An LED light indicates the drive status.
Spill-resistant keyboard with drains	Helps protect sensitive electronics and key components from minor spills by combining a thin layer of Mylar film under the keyboard with a drain system that funnels the fluid through a hole in the bottom of the notebook.
HP DuraKeys	Keeps your keyboard looking newer, longer with HP DuraKeys. HP DuraKeys have a clear coating applied over the notebook keyboard that helps protect the finish and the printed characters on the keys. HP DuraKeys are 50 times more resistant to visible wear than keyboards without it. ³
HP DuraFinish	Promotes a long-lasting finish. With scratch-resistant HP DuraFinish, your notebook's palm rest, display cover, and touchpad on select models are more protected from normal wear and tear so your notebook looks newer, longer.
Touch-sensitive controls	Controls applications with touch-sensitive controls that allow you to perform quick tasks such as adjusting the volume and engaging wireless connectivity at the touch of a button. These controls are also extremely durable because they're level to the surface, are particle-resistant, and have no moving parts, which all help enhance your notebook's reliability.
HP Total Test Process	Ensures you get a reliable and durable notebook that can go the distance. It includes a multi-tiered product validation process with comprehensive, end-to-end diagnostics and a minimum of 100,000 hours of testing per platform.

HP DuraCase

All HP EliteBook Notebooks include HP DuraCase, an innovation that includes a number of durability features to help protect the notebook from wear and tear. These complementary features work together to improve reliability and promote durability:

Magnesium alloy chassis	A full magnesium alloy chassis creates an incredibly strong case protecting the top and bottom of the notebook against rigorous usage. Magnesium alloy is 18 times stiffer than comparable plastic (PC/ABS) components.
Aircraft-inspired construction	The magnesium/aluminum display enclosure utilizes an inner magnesium shell with a honeycomb pattern that is thermally bonded to anodized aluminum for a solid construction and enhanced display impact protection. Inspired by aircraft construction for its durability, precision, and lightness, it creates a stiffer more durable panel with a professional high-end finish that is still lightweight.
Anodized aluminum surfaces	This innovative material used on the palm rest area and display enclosure is highly scratch-resistant, with a clean, sleek look.
Display latch	The display latch tightly locks the top and bottom of your notebook when you close the lid. The reinforced metal pins and hooks help prevent the display enclosure from additional vibrations, resulting in better protection of your system against shock and side impacts.
Hinges and axels	Metal alloy hinges with hardened steel pin axels are designed to withstand extensive use.

Mechanical testing

- Applies transverse force to the power cable from eight directions
- Simulates normal stresses on the enclosure to ensure that internal components are sufficiently protected
- Evaluates panel and surface wear from the display assembly and keyboard/palm rest being pressed together
- Performs multiple thermal tests, totaling 2400 test hours

Environmental testing

- Assesses the ability of a system to withstand the nearby presence of RF transmitters such as mobile phones, emergency personnel radios, and wireless cards
- Subjects notebooks to extreme temperature and humidity, simulating operation in harsh environments

System-level integration testing

- More than 30,000 steps and 240 industry-standard hardware and software products per operating system
- Approximately 7,000 total docking tests are performed on each platform to ensure quality and reliability throughout the lifecycle
- Wide Area Testing (WAT) validates HP hardware as well as industry standard hardware and software in typical customer environments
- Software Integration Test (SIT) verifies a quality interaction among drivers, applications, OS, and ROM and helps ensure software image quality and stability
- Windows Hardware Quality Lab (WHQL) verifies component and system compliance with the Microsoft Windows Logo Program
- The OS Integration Test (OSIT) validates new operating systems and service pack updates for compatibility

Learn more about HP Professional Innovations at www.hp.ca/not
HP Business Notebooks at www.hp.com/CA/notebooks

1. Testing was not intended to demonstrate fitness for DOD contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions.
2. Microsoft Windows required.
3. In independent testing conducted by Trace Laboratories, HP DuraKeys showed no wear after 250,000 cycles. Competitor notebooks showed significant wear after only 5,000 cycles.

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